

Reflections on Innovative Talents Training Measures Based on the Perspective of Teaching and Scientific Research Collaborative Education

Lei Qin

Jiangsu Ocean University, Lianyungang, Jiangsu, 222005, China

Abstract: *Teaching aims to help students master basic professional knowledge and lay a solid professional foundation. Scientific research aims to help students develop their own thinking ability and practical ability, and learn to apply knowledge in the process of solving practical problems. There is a close connection between scientific research and teaching, which plays an important role in cultivating a new generation of young people and students. Therefore, how to combine scientific research with teaching, take corresponding measures to cultivate talents, promote the improvement of students' personal quality, and cultivate innovative talents for the country is a problem worthy of consideration and research.*

Keywords: *Scientific Research and Teaching, Innovative Talents, Practical Ability*

1. Introduction

In the teaching process of colleges and universities, it is far from enough to help students master some basic professional knowledge. The professional knowledge learned in four years cannot meet the needs of the future society. Therefore, in the teaching process, it must be combined with scientific research, so that students can find and explore problems by themselves, and improve their comprehensive quality and ability in solving problems. Only in this way can students go to society in the future and use the knowledge they have learned to make corresponding contributions to the country. However, in the current process of cultivating talents, due to inappropriate education and teaching methods or the lack of close integration between teaching and scientific research, the effect of talent training is often poor. Therefore, this paper will propose some solutions to the existing problems to promote the cultivation of innovative talents.

2. Strengthen the construction of teaching staff

In the current process of cultivating talents in colleges and universities, some teachers can encourage students to explore boldly, and then find the problems they want to research in the process of hands-on practice. However, another part of the teachers may be lax in the management of students, and they have not given corresponding guidance to the students, and the students' ability to select topics and scientific research have not been truly improved. Therefore, in order to integrate teaching and scientific research, we should firstly improve the construction of teachers and enhance teachers' innovative ability and teaching ability.[1]

First of all, in the teaching process of the classroom, on the one hand, teachers can set the corresponding teaching content in combination with the goals and requirements of the course, on the other hand, teachers should also pay attention to infiltrating some scientific research-related topics in the process of explaining the students' majors content, help students understand the relationship between what they have learned and research questions, try to use the content learned in this course to conduct some simple research, and experience the entire scientific research process. This requires teachers to first improve their professional quality and innovation ability, and collect more relevant research hotspots or other content in the process of preparing lessons in order to explain and share them in the classroom.

Secondly, as the student's instructor, teachers should recognize the importance of helping students to exercise their scientific research ability, so they should give students enough time to encourage students to explore and think on their own, and think about researchable issues in the process of reading literature. At the same time, it is necessary to communicate with students on a regular basis to understand their

learning progress and some ideas, put forward certain suggestions for students' ideas, and guide students to move in a better direction. In the process of giving guidance to students, teachers must have certain innovation ability and opinions on related fields, otherwise some opinions put forward by teachers may not be able to give better guidance to students. Therefore, in order to promote the combination of teaching and scientific research and cultivate innovative talents, teachers should first improve their professional level, increase their knowledge, and constantly exercise their innovative ability. On the one hand, in the teaching process, students should learn professional knowledge as much as possible, think about problems related to research, and lay the foundation for students' research. On the other hand, it is necessary to give students some effective suggestions in the process of guiding students, and encourage students to improve their scientific research ability and learn to innovate in the process of self-exploration.

In addition, the school can also hold lectures by famous teachers on a regular basis, inviting some teachers in related fields to give lectures on topics of interest to students or more popular related lectures. In the process of opening the lecture, it can not only help teachers to communicate with each other, improve their own quality, and learn more about the research trends of professional categories, but also students can actively participate in the lecture if they are willing. Only in the process of continuous understanding can we enrich our professional knowledge reserve and broaden our horizons, which is conducive to the exploration of our own research problems and the improvement of our innovation ability.[2]

3. Give students autonomy

In the process of teaching in colleges and universities, students still need to take some courses to complete the corresponding credit requirements. Some teachers may directly stipulate the courses that students must take, and require students to master some basic methods and knowledge in the course of course study, so as to lay the foundation for their subsequent scientific research work. Although this method can help students who are not familiar with the professional field to find the direction of study, it also limits the freedom of students' choice to a certain extent. Because different students may have different scientific research interests, they need to choose some courses according to their own scientific research interests. The pleasure of scientific research can better stimulate their innovative ability.

Therefore, in the process of combining teaching and scientific research, teachers should give students full autonomy and allow students to choose some professional courses according to their own interests. At the same time, in the process of students' selection, in order to prevent students from choosing some courses that are not related to majors, teachers can give relevant suggestions to assist students in their selection. Secondly, in the process of students carrying out scientific research, teachers do not have to rush to formulate corresponding research fields and research directions for students. They can encourage students to read extensively while studying courses, find their own interests, and try to think, innovate, and research some meaningful questions. At the same time, in the process of choosing a research field or direction, teachers can also consciously guide students to combine what they have learned with research, and think about whether the course content can contribute to their own research. On the basis of giving students a certain degree of autonomy, it is also necessary to provide correct guidance to students. On the one hand, it avoids some students from delaying study and scientific research for other reasons, and on the other hand, it also prevents students from intervening in some scientific research mistakes and affecting their own research progress.

In a word, only by giving students sufficient autonomy space can they better cultivate their thinking ability and innovation ability. Teachers should give students sufficient space and opportunities in the process of teaching and research, and encourage students to explore on their own. But at the same time, teachers should also give corresponding guidance to prevent students from deviating from the right direction. In the teaching process, teachers should encourage students to have any ideas, or encounter any problems, they can come to the teacher in time to collide with more sparks of thinking in the process of communication. Teachers can also use their professional knowledge to provide students with more professional advice, and promote the coordinated development of students' professional theoretical knowledge learning and scientific research practice.

4. Enrich teaching content

Teaching can lay a certain knowledge foundation for students' scientific research, but teachers should not be limited to the teaching of relevant content. In this way, students are more limited in the classroom

and in books. Only from the teacher's explanation and some text descriptions to understand the relevant issues and content, this single teaching method is not conducive to the cultivation of students' innovative ability, nor is it conducive to students' combination of teaching content and scientific research, so in the collaborative education. From the perspective of human beings, teachers should consider adding more meaningful and practical teaching content in the teaching process.

For example, in the process of teaching, teachers can lead students to visit companies or carry out other practical activities in combination with some resources possessed by themselves or universities. On the one hand, it helps students to understand the relationship between practical and theoretical knowledge during the visit and practice process, and on the other hand, it can also help students find problems, think about problems and try to solve them with the knowledge they have learned in the process of understanding the current situation. Problems existing in the current business operation process. Scientific research problems should come from life and practice, and the purpose of scientific research is to use what one has learned to solve practical problems and provide theoretical guidance for practice. Research without practice is not real or meaningful research. Therefore, after realizing this, teachers can combine teaching content to enrich course activities as much as possible in the teaching process, and can also encourage students to find opportunities to conduct on-the-spot research and inspections, and try to think about whether problems in practice can be transformed into scientific research problems. , take some innovative ways to solve the problem. Teachers should lead students out of the classroom and into the reality. In the current teaching process, many students only find problems in the process of reading or paper learning, which is not a good training way and research path. This way often leads to students to deviate from the reality, do not understand the actual operation or operation process and unrestrained, resulting in their own research can not be promoted. At the same time in the process of students understand the actual research, teachers still should pay attention to the guidance of students, scientific research from practical but also to guide the actual, so can not completely rely on practice, to combine theory with practice, to further research and exploration, so as to use scientific theory to guide practice, the learned knowledge applied in the process of solving practical problems. In addition to the field research, teachers can also use the class communication symposium, organize and collect students want to understand practical problems, to discuss each other, can also assist multimedia facilities and a variety of rich video resources for teaching, help students in the process of learning to open their own thinking, understand the reality. At the same time, in the process of communication, teachers should pay attention to guide and inspire students, encourage students to think, abstract out the key scientific problems from practice, and seek solutions.

In short, the teachers can adjust the teaching method and the setting of the teaching content in combination with the actual teaching situation and the situation of the class students, enrich the teaching content as much as possible, and help the students to combine the knowledge learned in the course with their own scientific research and the problems in real life.

5. Teach students in accordance with their aptitude

Different students have different characteristics, teachers often need to guide a certain number of students, in this process, if the characteristics of different students are ignored, adopt a unified guidance method, there may be some problems. In recent years, there are often some mental diseases due to academic pressure or scientific research pressure, which affect their physical health, which also reflects the shortcomings in the process of cultivating talents in colleges and universities from the side.

In the process of cultivating innovative talents, some students' thinking ability, relatively speaking, still needs to be improved. When encountering some problems, you may lack your own thinking and excessive dependence on others' ideas and suggestions. So for this kind of students, in order to improve their innovation ability, teachers should put forward some brief opinions, let the students think in this direction, communicate with this classmate regularly, understand their scientific research progress, guide them to explore in the right direction, but also to give them full encouragement and affirmation, let them can have motivation to constantly think, so as to reduce their dependence on others. Both in the future scientific research and in the work are conducive to the improvement of their own ability. For other students with strong independent learning ability, they have been able to think about and solve problems on their own initiative, but in this process, some knowledge level may lead to their own difficulties, so. For this part of the students, teachers play the main role as the point, avoid them into too deep in some problems, timely guide them to continue to promote scientific research, at the same time, teachers can appropriately improve some difficulty, encourage students to learn some relatively cutting-edge methods to solve their problems encountered in the process of scientific research. In this way, for these students,

they can better promote the improvement of their personal ability, and they can continue to make progress at the original level. In the process of cultivating innovative talents, teachers should combine the different characteristics of different students to take the corresponding training way, give students full attention and communicate with them, guide them out of their current predicament, more encourage them to think to solve problems, so as to essentially improve their personal ability, but also can encourage students to take an active part in innovative competition project. In the process of competition, I can better improve their practical ability and test my knowledge level. At the same time, in the process of participation, we may also find some scientific problems worth research, which plays a good role in promoting the development of students.

6. Conclusion

There is a close connection between teaching and scientific research. Teaching content can lay a solid professional foundation for students' scientific research and help students master research methods and theoretical knowledge in some related fields, and scientific research is inseparable from students' professional knowledge level. To improve innovation ability, students must learn to think independently and use their knowledge to solve some problems in practice. From the perspective of collaborative education, colleges and teachers should combine existing resources to continuously provide students with a larger platform. Teachers should fully improve their innovation ability and scientific research ability in order to provide better guidance for students. At the same time, students should be encouraged to fully explore and think about themselves, try to solve problems by themselves, truly apply what they have learned, and continuously improve their innovative ability in the process of thinking and learning own value of life.

Acknowledgement

Fund Project: The 2021 undergraduate education and teaching reform project of Jiangsu Ocean University.

References

- [1] Wei J, Huang Y. Discussion on the innovation of applied undergraduate talent training mode from the perspective of collaborative education [J]. *Education and Teaching Forum*, 2018, 203-205.
- [2] Zhang D, Lu X, Zhao X. Cultivation of innovative talents based on the integration of science and education [J]. *China Metallurgical Education*, 2020, 29-31.